

**AMENDMENTS TO THE CLAIMS**

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1           1.-3. (Canceled)

1           4. (Currently amended) A module ~~An integrated circuit~~ for  
2 converting an optical signal to a digital signal comprising:  
3 an optical filter passing a filtered signal comprising a select range of  
4 frequencies present in an optical signal;  
5 a photodiode converting ~~an~~ the optical signal to a current;  
6 a transimpedance amplifier converting the photodiode current to a voltage at  
7 an output of the transimpedance amplifier,  
8 a sawtooth generator producing a sawtooth wave, and  
9 a comparator directly coupled to the output of the transimpedance amplifier,  
10 the comparator comparing the sawtooth wave with the ~~voltage~~ output of the  
11 transimpedance amplifier to produce a pulse-width modulated digital output.

1           5. (Canceled)

1           6. (Currently amended) The integrated circuit of Claim 4 wherein a  
2 plurality of ~~converter units, each converter unit comprising a~~ photodiodes each with  
3 an optical filter associated with one of red, green and blue light, a transimpedance  
4 amplifier, and a comparator, are synchronized to a common signal on a  
5 synchronization input.

1           7.-9. (Canceled)

1           10.   (Previously presented)   A method of converting the intensity of an  
2   optical source to a pulse-width modulation signal in a single integrated circuit  
3   comprising:  
4           filtering incident light from the optical source such that wavelengths of visible  
5   light impinge a sensor sensitive to a select range of wavelengths, wherein the select  
6   range of wavelengths is associated with one of red, green and blue light;  
7           converting the select range of wavelengths of visible light to a current;  
8           converting the current to a voltage;  
9           generating a sawtooth wave, and  
10          comparing the sawtooth wave to the voltage without inverting the voltage  
11   representing the select range of wavelengths of visible light to produce a digital pulse-  
12   width modulated output, wherein the steps of converting the current, generating and  
13   comparing are accomplished in a single integrated circuit.

1           11.   (Canceled)

1           12.   (Canceled)

1           13.   (Currently amended)   An apparatus for converting light to a digital  
2   signal comprising:  
3           a single module comprising a ground pin, a single supply pin, a  
4   synchronization pin and an output pin, the module further comprising:  
5           an optical filter passing a filtered signal comprising a select range of  
6           frequencies associated with one of red, green and blue light present in an  
7           optical signal;  
8           a photodiode configured to convert incident light to a current;  
9           a transimpedance amplifier configured to convert the current to a  
10   voltage;  
11          a sawtooth generator configured to produce a sawtooth wave; and  
12          a comparator configured to receive the sawtooth wave and the voltage  
13   to produce a pulse-width modulated digital output, wherein an output of the  
14   transimpedance amplifier is directly applied to an input of the comparator.

1           14.   (Currently amended)   The integrated circuit of Claim 13 where the  
2   module further comprises a single substrate.

1           15.   (Currently amended)   The integrated circuit of Claim 14 where the  
2   transimpedance amplifier, sawtooth generator, and comparator are implemented on  
3   the single substrate.

1           16.   (Canceled)

1           17.   (Previously presented)   The integrated circuit of Claim 13 where the  
2   transimpedance amplifier is directly coupled to the comparator.